



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2011-1230; Directorate Identifier 2011-NM-141-AD; Amendment 39-16964; AD 2012-04-08]**

**RIN 2120-AA64**

**Airworthiness Directives; Bombardier, Inc. Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Model DHC-8-102, -103, and -106 airplanes and Model DHC-8-200, -300, and -400 series airplanes. This AD was prompted by reports of cracking of the DHC-8 Series 100 rudder actuator mounting bracket. This AD requires modifying the mounting adapters of the power control unit (PCU). We are issuing this AD to prevent loss of both rudder PCU actuators which could result in free play of the rudder control surface and loss of controllability of the airplane.

**DATES:** This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may examine the AD docket on the Internet at

<http://www.regulations.gov> or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office (ACO), 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7318; fax (516) 794-5531.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on November 18, 2011 (76 FR 71470). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

Several reports have been received regarding cracking of the DHC-8 Series 100 rudder actuator mounting bracket. An investigation revealed that the mounting bracket has been under-designed based on the static and endurance loading conditions. The failure of the mounting brackets that attach the power control unit (PCU) to the airframe could result in a loss of the rudder actuating system. The loss of both rudder PCU actuators could result in free play of the rudder control surface and potentially induce a flutter condition.

This [TCCA] directive mandates the installation of a new design of rudder actuator mounting bracket [adapter].

The unsafe condition is loss of controllability of the airplane. You may obtain further information by examining the MCAI in the AD docket.

**Comments**

We gave the public the opportunity to participate in developing this AD. We considered the comment received. The commenter supports the NPRM (76 FR 71470, November 18, 2011).

### **Explanation of Change Made to this AD**

We have revised the heading for and the wording in paragraph (h) of this AD; this change has not changed the intent of that paragraph.

### **Conclusion**

We reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting the AD with the change described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (76 FR 71470, November 18, 2011) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (76 FR 71470, November 18, 2011).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

### **Costs of Compliance**

We estimate that this AD will affect about 171 products of U.S. registry. We also estimate that it will take up to 10 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost up to \$2,856 per product. Based on these figures, we estimate the cost of the AD on U.S. operators to be up to \$633,726, or \$3,706 per product.

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in “Subtitle VII, Part A, Subpart III, Section 44701: General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains the NPRM (76 FR 71470,

November 18, 2011), the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new AD:

**2012-04-08 Bombardier, Inc.:** Amendment 39-16964. Docket No. FAA-2011-1230; Directorate Identifier 2011-NM-141-AD.

#### **(a) Effective Date**

This airworthiness directive (AD) becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to Bombardier, Inc. airplanes identified in paragraphs (c)(1) and (c)(2) of this AD, certificated in any category.

(1) Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes, serial numbers 003 through 672 inclusive.

(2) Model DHC-8-400, -401, and -402 airplanes, serial numbers 4001 through 4343 inclusive.

**(d) Subject**

Air Transport Association (ATA) of America Code 27: Flight controls.

**(e) Reason**

This AD was prompted by reports of cracking of the DHC-8 Series 100 rudder actuator mounting bracket. We are issuing this AD to prevent loss of both rudder PCU actuators which could result in free play of the rudder control surface and loss of controllability of the airplane.

**(f) Compliance**

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

**(g) Free-Play Check and Corrective Actions**

Within 6,000 flight hours or 3 years after the effective date of this AD, whichever occurs first, do the actions required by paragraph (g)(1) or (g)(2) of this AD, as applicable.

(1) For Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes: Install a new CRES mounting adapter with new bolts by incorporating MODSUM 8Q101890, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-27-110, Revision C, dated May 13, 2011.

(2) For DHC-8-400, -401, and -402 airplanes: Replace the existing upper and lower mounting adapters of the PCU with redesigned adapters by incorporating

MODSUM 4-113655, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-53, dated November 26, 2010.

**(h) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraph (g)(1) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 8-27-110, Revision A, dated December 3, 2010; or Bombardier Service Bulletin 8-27-110, Revision B, dated January 31, 2011.

**(i) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) **Alternative Methods of Compliance (AMOCs):** The Manager, New York ACO, ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) **Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

**(j) Related Information**

Refer to MCAI Canadian Airworthiness Directive CF-2011-12, dated June 6, 2011; Bombardier Service Bulletin 8-27-110, Revision C, dated May 13, 2011; and Bombardier Service Bulletin 84-27-53, dated November 26, 2010; for related information.

**(k) Material Incorporated by Reference**

(1) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) of the following service information under 5 U.S.C. 552(a) and 1 CFR part 51:

(i) Bombardier Service Bulletin 8-27-110, Revision C, dated May 13, 2011.

(ii) Bombardier Service Bulletin 84-27-53, dated November 26, 2010.

(2) For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; e-mail [thd.qseries@aero.bombardier.com](mailto:thd.qseries@aero.bombardier.com); Internet <http://www.bombardier.com>.

(3) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.



(4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, call 202-741-6030, or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).  
Issued in Renton, Washington, on February 17, 2012.

Kalene C. Yanamura,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

[FR Doc. 2012-4494 Filed 03/05/2012 at 8:45 am; Publication Date: 03/06/2012]